

# WEST Search History

DATE: Monday, May 05, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L14	l3 and l13	16	L14
L13	((427?!)!.CCLS.)	127294	L13
L12	l3 and l11	26	L12
L11	((117?!)!.CCLS.)	17564	L11
L10	l3 and l9	133	L10
L9	((257?!)!.CCLS.)	252886	L9
L8	l6 and l3	91	L8
L7	l6 l3	137644	L7
L6	((438?!)!.CCLS.)	137447	L6
L5	l3 and l4	5	L5
L4	mulpuri,.xa,xp.	468	L4
L3	l1 same l2	288	L3
L2	(gallium adj nitride)or gan	13959	L2
L1	silicon adj nitride	95087	L1

END OF SEARCH HISTORY

9/22/97

985761  
09 380322  
10-165354

L11 ANSWER 14 OF 19 INSPEC COPYRIGHT 2003 FIZ KARLSRUHE  
 AN 1998:6037429 INSPEC DN A9821-6855-156; B9811-0510D-104  
 TI Lateral overgrowth of GaN on patterned GaN/sapphire  
 substrate via **selective** metal organic vapour phase epitaxy: a  
 route to produce self supported GaN substrates.  
 AU Beaumont, B.; Gibart, P.; Vaille, M.; Haffouz, S.; Nataf, G.; Bouille, A.  
 (Centre de Recherche sur l'Heteroepitaxie et ses Applications, Valbonne,  
 France)  
 SO Journal of Crystal Growth (June 1998) vol.189-190, p.97-102. 18 refs.  
 Doc. No.: S0022-0248(98)00180-8  
 Published by: Elsevier  
 Price: CCCC 0022-0248/98/\$19.00  
 CODEN: JCRGAE ISSN: 0022-0248  
 SICI: 0022-0248(199806)189/190L:97:LOPS;1-M  
 Conference: Second International Conference on Nitride Semiconductors.  
 Tokushima, Japan, 27-31 Oct 1997  
 Sponsor(s): Japan Soc. Applied Phys.; IEICE; IEEE-EDS; et al  
 DT Conference Article; Journal  
 TC Experimental  
 CY Netherlands  
 LA English  
 AB In the present paper we propose to extend the **selective** epitaxy  
 of GaN to the lateral overgrowth and to take advantage of the  
 growth anisotropy to produce strain free GaN crystals. After  
 filling the openings in a dielectric mask by **selective** epitaxy,  
 lateral overgrowth occurs reflecting the growth anisotropy. This allows  
 the fabrication of samples with non-planar geometry. The **selective**  
 epitaxy was achieved by metal organics vapour phase epitaxy (MOVPE)  
 whereas lateral overgrowth until island coalescence was carried out either  
 by MOVPE or halide vapour phase epitaxy (HVPE). A GaN epitaxial  
 layer is first grown using atmospheric pressure metalorganic vapour phase  
 epitaxy on {0001} sapphire. The dielectric film is **silicon**  
**nitride**. The openings are achieved using standard  
 photolithographic technology. These openings reveal free GaN  
 surface and are used for epitaxial regrowth by MOVPE, and then by HVPE.  
 CC A6855 Thin film growth, structure, and epitaxy; A6820 Solid surface  
 structure; A8115H Chemical vapour deposition; B0510D Epitaxial growth;  
 B2520D II-VI and III-V semiconductors; B2550G Lithography  
 CT GALLIUM COMPOUNDS; III-V SEMICONDUCTORS; ISLAND STRUCTURE; MASKS;  
 PHOTOLITHOGRAPHY; SEMICONDUCTOR EPITAXIAL LAYERS; SEMICONDUCTOR GROWTH;  
 TRANSMISSION ELECTRON MICROSCOPY; VAPOUR PHASE EPITAXIAL GROWTH  
 ST sapphire substrate; **selective epitaxy**; lateral overgrowth;  
 growth anisotropy; metal organic vapour phase epitaxy; dielectric mask;  
 island coalescence; photolithographic technology; halide vapour phase  
 epitaxy; MOVPE; GaN; Al2O3  
 CHI GaN bin, Ga bin, N bin; Al2O3 sur, Al2 sur, Al sur, O3 sur, O sur, Al2O3  
 bin, Al2 bin, Al bin, O3 bin, O bin  
 ET Ga\*N; GaN; Ga cp; cp; N cp; In; V; Al\*O; Al2O3; Al cp; O cp; Ga; Al2O; Al;  
 O

(FILE 'HOME' ENTERED AT 11:22:58 ON 06 MAY 2003)

FILE 'INSPEC' ENTERED AT 11:23:05 ON 06 MAY 2003

FILE 'INSPEC' ENTERED AT 11:23:44 ON 06 MAY 2003

L1 1449 GALLIUM (2A)NITRIDE  
L2 13046 GAN  
L3 9694 SILICON (2A) NITRIDE  
L4 20937 MASK  
L5 309491 SELECT#####  
L6 13162 L1 OR L2  
L7 88 L3 AND L4 AND L5  
L8 147 L3 (10A)L4  
L9 12 L6 AND L8  
L10 110 L3(P)L6  
L11 19 L10 (P)L5

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